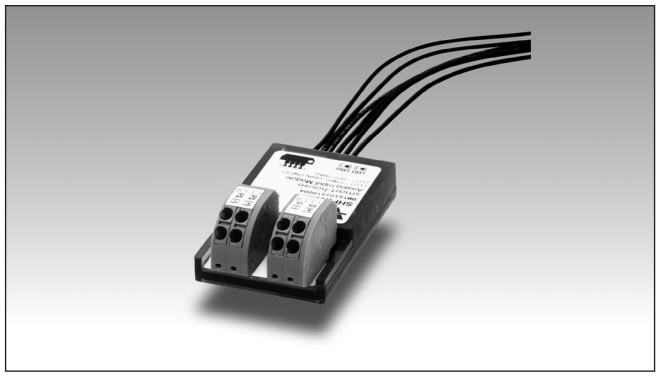
Smart Dupline®
Decentralized Analog Input Module
Type SHPINV324



- **3 x 0-10 VDC analog inputs**
- **24 VDC**
- **Small dimension housing for decentralized installation inside wall-box or environmental sensor housings**

Product Description

SHPINV324 is an input module with 3 analog inputs. The compact size of the module makes it possible to fit it into a wall-box or an environmental sensor housing, thereby enabling a decentralized installation concept where the Dupline® bus and DC power are multi-dropped from sensor to sensor. This simplifies the wiring to the Smart Dupline® system compared to traditional star wiring connections, reduces the number of DDC's and sub-panels required and provides a higher flexibility for last-minute changes and enhancements. The module has 3 x 0-10 VDC inputs. It is fully programmable via the SH tool.

Ordering Key

SH P IN V 3 24

- **Smart Dupline®**
- **Decentral**
- **Input module**
- **Voltage input**
- **Number of inputs**
- **Power supply**

Type Selection

Input module	Type	Supply: 24 VDC ± 20%
3	0-10V	**SHPINV324**

Supply Specifications

Power Supply	
Operational voltage range	24 VDC ±20%
Max ripple	1 V
Reverse polarity protection	Yes
Overvoltage category	Overvoltage cat. II (IEC 60664-1, par. 4.3.3.2)
Rated impulse voltage	500 V (1.2/50µs) (IEC 60664-1, tab. F.1)
Typ. current consumption	15 mA (only internal)
Max. output current	100 mA (not self-limited)
Power on delay	≤ 2 s
Power off delay	≤ 1 s

Specifications for Analog inputs

Input 1, 2 and 3	
Input type	3 x 0-10 VDC
Inaccuracy	< 0.5% fs (over entire temp range)
Max input level	50 V
Input impedance	>100 KΩ
Cable length	< 5 m

Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	1.5 mA

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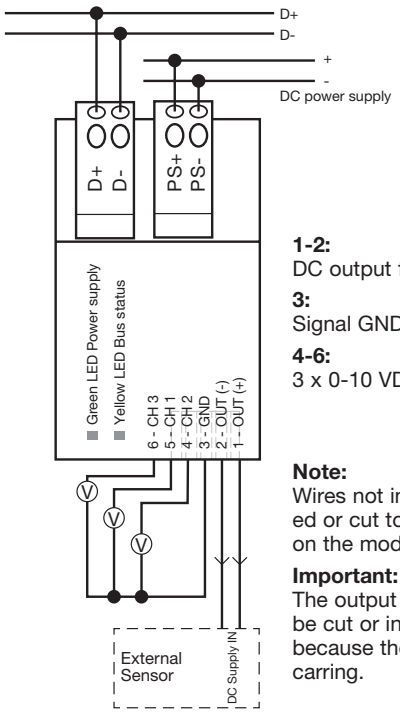
General Specifications

Environment	
Pollution degree	2(IEC 60664-1, par. 4.6.2)
Operating temperature	0 to +50°C (-4 to +122°F)
Storage temperature	-50 to +85°C (-58 to + 185°F)
Humidity (non-condensing)	20 - 90%
Housing	
Material	Macromel
Colour	Ambra
Dimensions (h x w x d)	50 x 30 x 18 mm
Weight	50 g
Protection degree	IP20
Terminal block	
Power supply input	4 x spring terminal
Dupline® bus	4 x spring terminal
Cross-sectional area	Terminal: 1.5 mm^2
Cable x 6	
1 DC+ supply for sensor	Out (+)
2 DC- supply for sensor	Out (-)
3 Signal ground	GND
4 V1 input 0-10 VDC	Input 1
5 V2 input 0-10 VDC	Input 2
6 V3 input 0-10 VDC	Input 3
Cross-sectional area	0.14 mm^2
Wire length	0.25 m

EMC	
Immunity	EN61000-6-2
- Electrostatic disharge	EN61000-4-2
- Radiated radiofrequency	EN61000-4-3
- Burst immunity	EN61000-4-4
- Surge	EN61000-4-5
- Conducted radiofrequency	EN61000-4-6
- Power frequency magnetic fields	EN61000-4-8
- Voltage dips, variations, interruptions	EN61000-4-11
Emission	
- Conducted and radiated emissions	CISPR 22 (EN55022), cl.B
- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)
Approvals	CE cULus according to UL60950

Wiring Diagram



1-2:
DC output for powering sensor

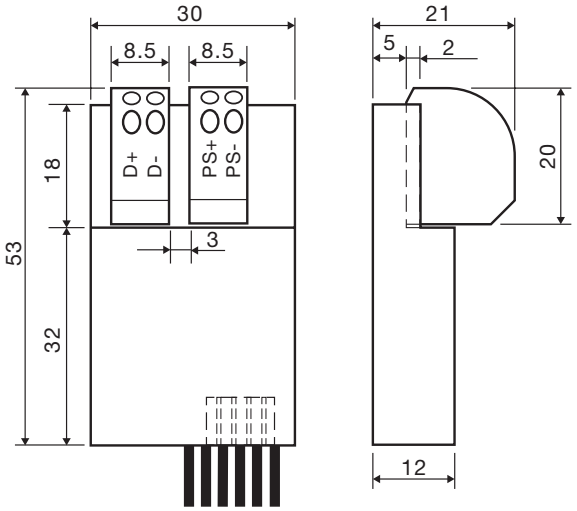
3:
Signal GND

4-6:
3 x 0-10 VDC analog inputs

Note:
Wires not in use must be insulated or cut to prevent malfunction on the module.

Important:
The output wires 1 and 2 must be cut or insulated if not used, because they are always current carring.

Dimensions



Specifications are subject to change without notice (03.01.2014)